

Appln No. 10/815,645
Amdt. Dated February 6, 2007
Response to Office Communication of January 12, 2007

2

Amendments to the Specification:

The Paragraphs beginning at Page 98, lines 20-35, through to Page 99, lines 1-2, are to be amended as follows:

The image sensor is usefully of freeze-frame type rather than rolling-shutter type to avoid skew between successive scan lines. A suitable image sensor design is described in the present applicants' co-pending Australian Patent Application entitled "Methods and Systems (NPS041)" (~~docket number NPS041~~) application No. 2003900746, filed 17 February 2003. Suitable freeze-frame image sensors are also available commercially from Micron, Texas Instruments and National Semiconductor.

Figure 62 shows the image sensor 2412 attached via a flexible PCB 2502 to the main PCB 2500. The main PCB as shown holds an image processor 2410, controller 2400 and communications interface 2424. Figure 12 a corresponding block diagram of the electronics.

The image processor 2410 is closely coupled with the image sensor 2412. A suitable design of the image processor is described the co-pending application (~~NPS041~~) No. 2003900746 identified above. As described in the co-pending application, the image sensor and image processor are designed to implemented together in the same chip, to minimise requirements for high-speed external interfacing. The image processor supports rapid readout of images from the image sensor into the image processor's internal memory, followed by relatively slower readout from the image processor's internal memory to the external controller. The image processor also provides low-level image processing functions to assist the controller with image processing and further reduce the data rate to the controller. The image processor also controls the timing of the image sensor and the synchronisation of image acquisition with the strobing of the illumination LEDs 2414.

The Paragraph beginning at Page 99, lines 15-21, is to be amended as follows:

The controller 2400 includes a processor 2300 which runs software to perform a number of tasks. These tasks include overall control of the scanner; real-time decoding of images of Hyperlabel™ tags acquired and pre-processed by the image sensor 2412 and image processor 2410; and encoding and transmission of scan data to the external control unit via the communications interface 2424 (or alternatively via the baseband controller 2416 and radio transceiver 2418). Image processing and decoding are described in detail in the co-pending application (~~NPS041~~) No. 2003900746 identified above, as well as in the main body of this specification.